

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHARLES KANNANKERIL and RICHARD FREUNDLICH

Appeal 2006-0153
Application 10/082,635
Technology Center 1700

Decided: August 14, 2007

Before EDWARD C. KIMLIN, CHUNG K. PAK, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 12 through 31 (Br. 3). Claims 1 through 11, the other pending claims in the above-identified application, stand withdrawn from consideration as being directed to a non-elected invention (*id.*). We have jurisdiction pursuant to 35 U.S.C. § 6.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a process for making a cushioning article employing a recycled polyester oxygen (gas) barrier layer (Specification 1). This process is said to satisfy the Appellants' desire to employ a less expensive polymer as an oxygen barrier layer (Specification 2). Further details of the appealed subject matter are recited in representative claim 12 reproduced below:

12. A process for making a cushioning article,
comprising the steps of:

(A) extruding a first multilayer film having first and second outer layers each of which contains an olefin-based polymer, and an inner O₂-barrier layer; and

(B) extruding a second multilayer film having first and second outer layers each of which contains an olefin-based polymer, and an inner O₂-barrier layer; and

(C) adhering the first and second multilayer films to one another so that a plurality of cells are formed; and

wherein the inner O₂-barrier layer of the first multilayer film, or the inner O₂-barrier layer of the second multilayer film, contain recycled polyester.

As evidence of unpatentability of the claimed subject matter, the Examiner has relied upon the following references:

Chavannes	US 3,294,387	Dec. 27, 1966
Kawakami	US 3,954,368	May 4, 1976
Lewicki	US 4,076,872	Feb. 28, 1978
Larson	US 4,096,306	Jun. 20, 1978
Ottaviano	US 4,314,865	Feb. 9, 1982

Deiringer	EP 483,665	May 6, 1992 ¹
Fox	US 5,116,444	May 26, 1992
Bekele	US 5,482,770	Jan. 9, 1996
Clements	US 5,503,790	Apr. 2, 1996
Kamo	JP 10-151627	Jun. 9, 1998
Ramesh	US 5,843,502	Dec. 1, 1998
Ramirez	US 6,214,392 B1	Apr. 10, 2001
De Luca	US 6,410,119 C1	Jun. 25, 2002
Matarasso	US 2002/0094393 A1	Jul. 18, 2002
Simhaee	US 6,423,166 B1	Jul. 23, 2002

The Examiner has finally rejected the claims on appeal as follows:

- 1) Claims 12 through 15, 21 through 26, 30, and 31 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Ottaviano, Lewicki, either Fox or Kawakami and any one of Kamo, Deiringer, and Clements;
- 2) Claims 16 through 18 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Ottaviano, Lewicki, Chavannes, either Fox or Kawakami, and any one of Kamo, Dieringer, and Clements;
- 3) Claims 19 and 20 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Ottaviano, Lewicki, either Fox or Kawakami, any one of Kamo, Dieringer, and Clements and any one of Matarasso, De Luca, Simhaee, and Larson; and
- 4) Claims 27 and 28 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Ottaviano, Lewicki, either Fox or

¹ The Appellants have not challenged the Examiner's reliance on U.S. Patent 5,225,130 issued to Deiringer on Jul. 6, 1993, as the corresponding English translation of EP 483,665 relied upon in the statements of rejection.

Kawakami, any one of Kamo, Dieringer, and Clements, and any one of Ramirez, Ramesh, and Bekele.

The Appellants appeal from the Examiner's decision finally rejecting the claims on appeal under 35 U.S.C. § 103(a).

ISSUE

Would one of ordinary skill in the art have been led to employ recycled polyester, in lieu of nylon, as an oxygen barrier in the bubble wrap making process suggested by the combined disclosures of Ottaviano and either Fox or Kawakami within the meaning of 35 U.S.C. § 103(a)?

FACTS, PRINCIPLES OF LAW, AND ANALYSES

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary consideration (e.g., unexpected results). *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467(1966). “[A]nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007) *quoting In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336-37 (Fed. Cir. 2006); *see also DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006)(“The motivation need not be found in

the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”); *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)(“Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness ‘from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.’”).

Here, the Appellants have not challenged the Examiner’s determination that the prior art references would have suggested the claimed bubble wrap making process, except for employing recycled polyester as an oxygen barrier(Br. 6). As argued by the Appellants, Ottaviano employs nylon material, rather than recycled polyester, as an oxygen barrier (Br. 6-12).

Therefore, the dispositive question is whether one of ordinary skill in the art would have been led to employ recycled polyester, in lieu of nylon material, as an oxygen barrier in the bubble wrap making process suggested by the combined disclosures of Ottaviano and either Fox or Kawakami within the meaning of 35 U.S.C. § 103(a). On this record, we answer this question in the affirmative.

As correctly found by the Examiner (Answer, 8):

[I]t was known as evidenced by Lewicki et al to provide an oxygen barrier in the manufacture of a bubble wrap and/or dunnage from polyester materials as well as nylon materials (i.e. that polyester would have been an art recognized alternative material for nylon which achieved the same function as the nylon barrier of Ottaviano '865). The reference to

Lewicki et al [would have] suggested at column 2, lines 28-37... that those skilled in the art would have readily appreciated that nylon or polyester films would have been useful in the manufacture of dunnage by virtue of the fact that the same was air impervious.

Specifically, Lewicki teaches at column 2, lines 28-37 that:

The first embodiment of the invention is illustrated in simplified form in FIGS. 1 to 6 of the drawings. The cushioning unit 10 is preferably formed of four laminations. The uppermost sheet 1 is a thermoplastic polymeric film such as polyethelene [sic. polyethylene], polypropylene, *polyesters*, *nylon*, polyvinyl chloride, polyvinylidene, polyurethane, etc., having a thickness which may range from 0.3 mil to 5 mil. or more, depending upon the intended use of the material which, of course, is *gas impervious as well as abrasion and wear resistant*. [Emphasis added.]

Lewicki not only describes that, *inter alia*, gas impervious polyester and nylon materials are interchangeable in the bubble wrap art, but also impliedly teaches that the selection of appropriate thermoplastic polymeric films, such as polyesters and nylon, based on intended uses is well within the ambit of one of ordinary skill in the art. *Compare, e.g., In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980) (“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.”) The Examiner has also found, and the Appellants have not disputed, that:

[I]t was known in the art of polyester resins [as evidenced by any one of Kamo, Deiringer and Clements] to included [sic, include] recycled polyester (and/or post consumed polyester) in the virgin polyester resin used in an extrusion operation to form a film of the same (where in some instances[,] the film was

subjected to a thermoforming operation...). The ordinary artisan would have been led to employ the recycled polyester (recycled or post consumer PET) as such would have reduced the cost of the overall operation. [Compare Answer 8-9 with, e.g., Br. 10.]

Given the above uncontroverted facts, we determine that one of ordinary skill in the art would have been led to employ, inter alia, a gas impermeable film containing recycled polyester in the bubble wrap making process suggested by the combined disclosures of Ottaviano and either Fox or Kawakami, motivated by a reasonable expectation of successfully obtaining the cost improvement.

The Appellants contend that in reference to page 2 of the Specification, the Appellants' invention employs recycled polyester for solving a problem not appreciated by the prior art references (Br. 10-12). Specifically, the claimed process is said to employ the recycled polyester because "[the] recycled polyester can be processed (i.e., extruded, formed, et.) about 25°F lower than the temperature at which virgin polyester can be processed" (Br. 11). This contention, however, overlooks the principle that the motivation in the prior art to combine the prior art teachings does not have to be identical to that of the Appellants to establish obviousness. *In re Kemps*, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996). This is especially true in this case since one of the reasons for employing the recycled polyester disclosed in the Specification was known at the time of the invention. Compare the above finding relating to the cost benefit and the Appellants' statement relating to the desirability to provide a less expensive polymer at page 2 of the Specification. *Ex parte Obiaya*, 227 USPQ 58, 60

(Bd. Pat. App. & Int. 1985) (holding that the recognition of another advantage flowing naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious). In any event, from our perspective, the processing temperature of the recycled polyester would have been readily recognized by simple observation. *In re Ludwig*, 353 F.2d 241, 243-44, 147 USPQ 420, 421 (CCPA 1965).

Thus, based on the totality of record, including due consideration of the Appellants' arguments and evidence, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of 35 U.S.C. § 103(a). Accordingly, we determine that the prior art references relied upon by the Examiner would have rendered the claimed subject matter obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

ORDER

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

sld/ljs

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